

SEQUENCE LISTING

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<120> Novel Compounds

<130> BM45412

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<170> FastSEQ for Windows Version 3.0

<210> 1

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<212> DNA

<213> *Moraxella catarrhalis*

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<210> 2

<211> 502

<212> PRT

<213> *Moraxella catarrhalis*

<400> 2

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Pro	Lys	Ser	Ser	Thr	Val	Asp	Ala	Ala	Lys	Thr	Ala	Asn	Ala	Asp	

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Pro Ala Lys Val Val Lys Met Glu Thr Val Glu Lys Val Met Arg
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Leu Ala Asp Gly Val Glu Tyr Gln Phe Trp Thr Phe Gly Gly Gln Val
      100      105      110
Pro Gly Gln Met Ile Arg Val Arg Glu Gly Asp Thr Ile Glu Val Gln
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Phe Ser Asn His Pro Asp Ser Lys Met Pro His Asn Val Asp Phe His
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Ala Ala Thr Gly Pro Gly Gly Gly Ala Glu Ala Ser Phe Thr Ala Pro
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Gly His Thr Ser Thr Phe Ser Phe Lys Ala Leu Gln Pro Gly Leu Tyr
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Val Tyr His Cys Ala Val Ala Pro Val Gly Met His Ile Ala Asn Gly
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Asp Lys Glu Tyr Tyr Val Met Gln Gly Asp Phe Tyr Thr Lys Gly Lys
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Tyr Gly Glu Gln Gly Leu Gln Pro Phe Asp Met Glu Lys Ala Ile Arg
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Glu Asp Ala Glu Tyr Val Val Phe Asn Gly Ser Val Gly Ala Leu Thr
      245      250      255
Gly Glu Asn Ala Leu Lys Ala Lys Val Gly Glu Thr Val Arg Leu Phe
      260      265      270
Val Gly Asn Gly Gly Pro Asn Leu Thr Ser Ser Phe His Val Ile Gly
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Glu Ile Phe Asp Lys Val His Phe Glu Gly Gly Lys Gly Glu Asn His
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Phe Lys Val Asp Val Pro Gly Asp Tyr Val Leu Val Asp His Ala Ile
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Phe Arg Ala Phe Asn Lys Gly Ala Leu Gly Ile Leu Lys Val Glu Gly
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Glu Glu Asn His Glu Ile Tyr Ser His Lys Gln Thr Asp Ala Val Tyr
      355      360      365
Leu Pro Glu Gly Ala Pro Gln Ala Ile Asp Thr Gln Glu Ala Pro Lys
      370      375      380
Thr Pro Ala Pro Ala Asn Leu Gln Glu Gln Ile Lys Ala Gly Lys Ala
      385      390      395      400
Thr Tyr Asp Ser Asn Cys Ala Ala Cys His Gln Pro Asp Gly Lys Gly
      405      410      415
Val Pro Asn Ala Phe Pro Pro Leu Ala Asn Ser Asp Tyr Leu Asn Ala
      420      425      430
Asp His Ala Arg Ala Ala Ser Ile Val Ala Asn Gly Leu Ser Gly Lys
      435      440      445
Ile Thr Val Asn Gly Asn Gln Tyr Glu Ser Val Met Pro Ala Ile Ala
      450      455      460
Leu Ser Asp Gln Gln Ile Ala Asn Val Ile Thr Tyr Thr Leu Asn Ser
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 <213> *Moraxella catarrhalis*

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 cccgccaagc tgggtgtaaa aatggaaacc gttgaaaaag tcatgctgtc ggcatatggc 300
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 ggtcatatat caacctttag ttttaaagcc ttacagcctg gtttgtatgt ctatcactgt 540
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<210> 4
 <211> 502
 <212> PRT
 <213> *Moraxella catarrhalis*

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 35 40 45
 Asn Ala Ala Ser Gln Glu His Gln Gly Glu Leu Pro Val Ile Asp Ala
 50 55 60
 Ile Val Thr His Ala Pro Glu Val Pro Pro Pro Val Asp Arg Asp His
 65 70 75 80
 Pro Ala Lys Val Val Lys Met Glu Thr Val Glu Lys Val Met Arg
 85 90 95
 Leu Ala Asp Gly Val Glu Tyr Gln Phe Trp Thr Phe Gly Gly Gln Val
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 Pro Gly Gln Met Ile Arg Val Arg Glu Gly Asp Thr Ile Glu Val Gln
 115 120 125
 Phe Ser Asn His Pro Asp Ser Lys Met Pro His Asn Val Asp Phe His

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 Ala Ala Thr Gly Pro Gly Gly Gly Ala Glu Ala Ser Phe Thr Ala Pro
 145 150 155 160
 Gly His Thr Ser Thr Phe Ser Phe Lys Ala Leu Gln Pro Gly Leu Tyr
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 Val Tyr His Cys Ala Val Ala Pro Val Gly Met His Ile Ala Asn Gly
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 Met Tyr Gly Leu Ile Leu Val Glu Pro Lys Glu Gly Leu Pro Lys Val
 195 200 205
 Asp Lys Glu Tyr Tyr Val Met Gln Gly Asp Phe Tyr Thr Lys Gly Lys
 210 215 220
 Tyr Gly Glu Gln Gly Leu Gln Pro Phe Asp Met Glu Lys Ala Ile Arg
 225 230 235 240
 Glu Asp Ala Glu Tyr Val Val Phe Asn Gly Ser Val Gly Ala Leu Thr
 245 250 255
 Gly Glu Asn Ala Leu Lys Ala Lys Val Gly Glu Thr Val Arg Leu Phe
 260 265 270
 Val Gly Asn Gly Gly Pro Asn Leu Thr Ser Ser Phe His Val Ile Gly
 275 280 285
 Glu Ile Phe Asp Lys Val His Phe Glu Gly Gly Lys Gly Glu Asn His
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 Asn Ile Gln Thr Thr Leu Ile Pro Ala Gly Gly Ala Ala Ile Thr Glu
 305 310 315 320
 Phe Lys Val Asp Val Pro Gly Asp Tyr Val Leu Val Asp His Ala Ile
 325 330 335
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 340 345 350
 Glu Glu Asn His Glu Ile Tyr Ser His Lys Gln Thr Asp Ala Val Tyr
 355 360 365
 Leu Pro Glu Gly Ala Pro Gln Ala Ile Asp Thr Gln Glu Ala Pro Lys
 370 375 380
 Thr Pro Ala Pro Ala Asn Leu Gln Glu Gln Ile Lys Ala Gly Lys Ala
 385 390 395 400
 Thr Tyr Asp Ser Asn Cys Ala Ala Cys His Gln Pro Asp Gly Lys Gly
 405 410 415
 Val Pro Asn Ala Phe Pro Pro Leu Ala Asn Ser Asp Tyr Leu Asn Ala
 420 425 430
 Asp His Ala Arg Ala Ala Ser Ile Val Ala Asn Gly Leu Ser Gly Lys
 435 440 445
 Ile Thr Val Asn Gly Asn Gln Tyr Glu Ser Val Met Pro Ala Ile Ala
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 Leu Ser Asp Gln Gln Ile Ala Asn Val Ile Thr Tyr Thr Leu Asn Ser
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<400> 6
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SEQUENCE LISTING

<110> Joelle Thonnard

<120> Novel Compounds

<130> BM45412

<150> 9921691.3

<151> 1999-09-14

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<170> FastSEQ for Windows Version 4.0

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<212> DNA

<213> Moraxella catarrhalis

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<210> 2

<211> 502

<212> PRT

<213> Moraxella catarrhalis

<400> 2

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Pro	Lys	Ser	Ser	Thr	Val	Asp	Ala	Ala	Ala	Lys	Thr	Ala	Asn	Ala	Asp	35	40	45	
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Ile	Val	Thr	His	Ala	Pro	Glu	Val	Pro	Pro	Pro	Val	Asp	Arg	Asp	His	65	70	75	80
Pro	Ala	Lys	Val	Val	Val	Lys	Met	Glu	Thr	Val	Glu	Lys	Val	Met	Arg	85	90	95	
Leu	Ala	Asp	Gly	Val	Glu	Tyr	Gln	Phe	Trp	Thr	Phe	Gly	Gly	Gln	Val	100	105	110	
Pro	Gly	Gln	Met	Ile	Arg	Val	Arg	Glu	Gly	Asp	Thr	Ile	Glu	Val	Gln	115	120	125	
Phe	Ser	Asn	His	Pro	Asp	Ser	Lys	Met	Pro	His	Asn	Val	Asp	Phe	His	130	135	140	
Ala	Ala	Thr	Gly	Pro	Gly	Gly	Gly	Ala	Glu	Ala	Ser	Phe	Thr	Ala	Pro	145	150	155	160
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Val	Tyr	His	Cys	Ala	Val	Ala	Pro	Val	Gly	Met	His	Ile	Ala	Asn	Gly	180	185	190	
Met	Tyr	Gly	Leu	Ile	Leu	Val	Glu	Pro	Lys	Glu	Gly	Leu	Pro	Lys	Val	195	200	205	
Asp	Lys	Glu	Tyr	Tyr	Val	Met	Gln	Gly	Asp	Phe	Tyr	Thr	Lys	Gly	Lys	210	215	220	
Tyr	Gly	Glu	Gln	Gly	Leu	Gln	Pro	Phe	Asp	Met	Glu	Lys	Ala	Ile	Arg	225	230	235	240
Glu	Asp	Ala	Glu	Tyr	Val	Val	Phe	Asn	Gly	Ser	Val	Gly	Ala	Leu	Thr	245	250	255	
Gly	Glu	Asn	Ala	Leu	Lys	Ala	Lys	Val	Gly	Glu	Thr	Val	Arg	Leu	Phe	260	265	270	
Val	Gly	Asn	Gly	Gly	Pro	Asn	Leu	Thr	Ser	Ser	Phe	His	Val	Ile	Gly	275	280	285	
Glu	Ile	Phe	Asp	Lys	Val	His	Phe	Glu	Gly	Gly	Lys	Gly	Glu	Asn	His	290	295	300	
Asn	Ile	Gln	Thr	Thr	Leu	Ile	Pro	Ala	Gly	Gly	Ala	Ala	Ile	Thr	Glu	305	310	315	320
Phe	Lys	Val	Asp	Val	Pro	Gly	Asp	Tyr	Val	Leu	Val	Asp	His	Ala	Ile	325	330	335	
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Glu	Glu	Asn	His	Glu	Ile	Tyr	Ser	His	Lys	Gln	Thr	Asp	Ala	Val	Tyr	355	360	365	
Leu	Pro	Glu	Gly	Ala	Pro	Gln	Ala	Ile	Asp	Thr	Gln	Glu	Ala	Pro	Lys	370	375	380	
Thr	Pro	Ala	Pro	Ala	Asn	Leu	Gln	Glu	Gln	Ile	Lys	Ala	Gly	Lys	Ala	385	390	395	400
Thr	Tyr	Asp	Ser	Asn	Cys	Ala	Ala	Cys	His	Gln	Pro	Asp	Gly	Lys	Gly	405	410	415	

Val Pro Asn Ala Phe Pro Pro Leu Ala Asn Ser Asp Tyr Leu Asn Ala
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 Asp His Ala Arg Ala Ala Ser Ile Val Ala Asn Gly Leu Ser Gly Lys
 435 440 445
 Ile Thr Val Asn Gly Asn Gln Tyr Glu Ser Val Met Pro Ala Ile Ala
 450 455 460
 Leu Ser Asp Gln Gln Ile Ala Asn Val Ile Thr Tyr Thr Leu Asn Ser
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<210> 3

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<212> DNA

<213> Moraxella catarrhalis

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<210> 4

<211> 502

<212> PRT

<213> Moraxella catarrhalis

<400> 4

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Pro	Lys	Ser	Ser	Thr	Val	Asp	Ala	Ala	Ala	Lys	Thr	Ala	Asn	Ala	Asp
		35					40					45			
Asn	Ala	Ala	Ser	Gln	Glu	His	Gln	Gly	Glu	Leu	Pro	Val	Ile	Asp	Ala
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Pro	Ala	Lys	Val	Val	Val	Lys	Met	Glu	Thr	Val	Glu	Lys	Val	Met	Arg
			85						90					95	
Leu	Ala	Asp	Gly	Val	Glu	Tyr	Gln	Phe	Trp	Thr	Phe	Gly	Gly	Gln	Val
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Phe	Ser	Asn	His	Pro	Asp	Ser	Lys	Met	Pro	His	Asn	Val	Asp	Phe	His
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				165				170						175	
Val	Tyr	His	Cys	Ala	Val	Ala	Pro	Val	Gly	Met	His	Ile	Ala	Asn	Gly
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Asp	Lys	Glu	Tyr	Tyr	Val	Met	Gln	Gly	Asp	Phe	Tyr	Thr	Lys	Gly	Lys
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225					230					235					240
Glu	Asp	Ala	Glu	Tyr	Val	Val	Phe	Asn	Gly	Ser	Val	Gly	Ala	Leu	Thr
				245					250					255	
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Asn	Ile	Gln	Thr	Thr	Leu	Ile	Pro	Ala	Gly	Gly	Ala	Ala	Ile	Thr	Glu
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Phe	Lys	Val	Asp	Val	Pro	Gly	Asp	Tyr	Val	Leu	Val	Asp	His	Ala	Ile
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Phe	Arg	Ala	Phe	Asn	Lys	Gly	Ala	Leu	Gly	Ile	Leu	Lys	Val	Glu	Gly
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Glu	Glu	Asn	His	Glu	Ile	Tyr	Ser	His	Lys	Gln	Thr	Asp	Ala	Val	Tyr
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Leu	Pro	Glu	Gly	Ala	Pro	Gln	Ala	Ile	Asp	Thr	Gln	Glu	Ala	Pro	Lys
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Thr	Pro	Ala	Pro	Ala	Asn	Leu	Gln	Glu	Gln	Ile	Lys	Ala	Gly	Lys	Ala
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Thr	Tyr	Asp	Ser	Asn	Cys	Ala	Ala	Cys	His	Gln	Pro	Asp	Gly	Lys	Gly
				405					410					415	
Val	Pro	Asn	Ala	Phe	Pro	Pro	Leu	Ala	Asn	Ser	Asp	Tyr	Leu	Asn	Ala
			420					425					430		
Asp	His	Ala	Arg	Ala	Ala	Ser	Ile	Val	Ala	Asn	Gly	Leu	Ser	Gly	Lys
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Ile Thr Val Asn Gly Asn Gln Tyr Glu Ser Val Met Pro Ala Ile Ala
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 Leu Ser Asp Gln Gln Ile Ala Asn Val Ile Thr Tyr Thr Leu Asn Ser
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